



IBI GROUP
8101 North High Street, Suite 100
Columbus OH 43235 USA
tel 614 818 4900 fax 614 818 4901
ibigroup.com

June 3, 2022

Administrator, DOSD
Attn: Greg Fedner, P.E.
Section Manager, Plan Review Section
1250 Fairwood Avenue
Columbus, Ohio 43206

Re: **Type II Variance Request**
CC-19526
Lakeside Village, 4100 Lakeview Crossing, Columbus, Ohio 43125
PID: 010-213774 & 010-243275
Total Site Area: 24.458 Acres
Total Disturbed Area: 17.38 Acres
Existing Property Owner: M-Five, Limited Partnership
Developer: Metro Development, LLC (Note: Metro will be property owner after closing)

Dear Mr. Fedner:

The following Type II Variances are requested from the City of Columbus Stormwater Drainage Manual (SWDM), revised May 2021, for the referenced project:

1. Pursuant to Section 3.1.2 of the SWDM, stormwater control facilities shall not be located within designated Federal Emergency Management Agency (FEMA) 100-year floodplain boundaries.
2. Pursuant to Section 3.1.7 of the SWDM, Storage capacity below the base flood elevation shall not be included in total storage capacity calculations for stormwater control facilities located adjacent to or vertically within the 100-year floodplain boundary,

Exhibit Descriptions

Three site exhibits have been prepared. In all three scenarios, the existing wetlands will not be disturbed or utilized for stormwater detention. Therefore, no wetland mitigation is needed. In addition, all three scenarios will use a "single stage" plan approach.

1. Full Compliant Alternative (See "No Impact" Exhibit)
This exhibit shows a site layout fully compliant with the SWDM. This layout is based on using the Franklin County Auditor GIS 100-year floodplain. As seen in this exhibit, there is limited room available on site (outside the 100-year flood plain, outside utility easements, and above the base flood elevation) to construct a stormwater detention facility. The proposed parking and building shown on the exhibit would require filling within the 100-year floodplain. Compensatory cut and the fill needed to raise the site is provided within the 100-year floodplain. Development is feasible along Lakeview Crossing only due to the presence of existing utilities and public road access.

Given the space limitations and grading involved, it appears the construction of only one (1) building is feasible.

2. Minimal Impact Alternative (See “Minimal Impact” Exhibit)

This layout is based on using the Franklin County Auditor GIS 100-year floodplain. Compared to the “No Impact” scenario, this layout requires more fill within the 100-year floodplain. It also requires the construction of the stormwater detention facilities within the 100-year floodplain, but at an elevation at or above the base flood elevation. Consequently, with the additional pond storage available, there is more potential to develop parking and buildings. In this scenario, it appears the construction of six (6) apartment building are feasible. Compensatory cut is provided within the 100-year floodplain. However, the cut volume within the 100-year floodplain is not sufficient to raise the site to desired levels; thus, imported fill is needed.

3. Preferred Alternative (See attached CC-19526 Grading Plan)

The preferred layout requires the Type II variances listed previously. The grading plan associated with CC-19526 is utilized as the exhibit for this scenario. To maximize the sites potential and to make the project economically feasible, the proposed stormwater detention facility is located within the 100-year flood plain, with storage capacity below the base flood elevation. As a result, eleven (11) apartment buildings are proposed. Filling within the 100-year flood plain would be required. Compensatory cut is provided within the 100-year floodplain. This scenario balances the needed cut-fill earthwork and makes the project feasible.

Hardships Description

The requirements to locate the stormwater detention facility outside the 100-year flood plain, and with storage capacity above the base flood elevation, places a hardship on the project. These hardships are described as follows:

- Developable Area

Lakeside Village falls within the Community Reinvestment Area (CRA) boundary (see attached exhibit with Lakeside Village being called out). Currently, most of the 24.458-acre site is located within the floodway and 100-year flood plain; thus, reducing the potential for affordable housing. The proposed development will set aside 20% of the units for affordable housing. The preferred alternative proposes to construct 264 total units, with 54 designated as affordable units. Limiting the developable area to the area shown on the “No Impact” exhibit would reduce the proposed affordable housing units to 5. It would reduce the number of affordable units on the “Minimal Impact” exhibit to 29.

- Fill Height

If the stormwater detention facility is placed outside the 100-year flood plain, with pond storage above the base flood elevation, it will increase the fill height needed under the proposed parking and buildings. This additional fill is needed so that proper vertical cover/slope can be provided for the storm pipes discharging into the stormwater detention facility.

- In the “No Impact” scenario, approximately 5-feet of fill is needed to raise the site from the base flood elevation to pad elevation (751.0)

- In the “Minimal Impact” scenario, approximately 6-feet of fill is needed to raise the site from the base flood elevation to pad elevation (752.0)
- In the “Preferred Alternative”, approximately 3-feet of fill is needed to raise the site from the base flood elevation to pad elevation (749.0)

In the “Preferred Alternative” the stormwater detention facility is located at a lower elevation (proposed normal pool elevation is approximately 7-feet below base flood elevation) which results in less fill height being needed under the proposed parking/buildings.

The existing pavement elevation of Lakeview Crossing and Hamilton Square Boulevard is in the approximate range of 747.0 to 748.5. The fill heights required by the “No Impact” and “Minimal Impact” scenarios create steeper slopes for vehicular and pedestrian access into the site. It also creates a pad elevation multiple foot higher than the existing nearby developments.

- Cost

Due to economies of scale, the cost per building is cheaper when spread out over a greater land area, resulting in a greater number of buildings to be constructed. The cost is also reduced when the amount of compactible fill depth (beneath the buildings and parking pads) is reduced, such as when the “Preferred Alternative” is used.

In the “Minimal Impact” scenario, approximately 51,851 C.Y. of clay fill import is needed to construct the site at the proposed elevations. At a unit cost of \$20/C.Y., this adds an additional cost of \$1,037,020 to the project, not including the additional time/cost to structurally fill the site.

In the “Preferred Alternative” scenario, the lower pad elevation combined with the cut obtained from the wet basin excavation creates a more balanced and less extensive cut-fill, where imported fill is not needed. Earthwork calculations indicate that a 40,420 C.Y. cut volume and a 37,620 C.Y. fill volume is created. The total amount of earthwork volume is actually less in the “Preferred Alternative” scenario (compared to “Minimal Impact”).

Justifications for Deviation

It is felt that the variance requests and deviations from the SWDM are justified for the following reasons:

- The increased developable area will provide an opportunity to construct more affordable housing and help fill a housing shortage need.
- Granting the variance requests creates more balanced and less costly earthwork; thus, providing a more economically feasible project. Without the variance requests, the construction costs become prohibitive.
- To compensate for earthwork activities within the 100-year floodplain, additional wetland area will be created south of the existing wetland (see blue highlighted area on sheet 4/25 of CC-19526).
- The base flood elevation varies from elevation 745.2 to 746.3 across the site (from southwest to northeast). The proposed wet basin will be excavated to provide a 6-foot depth. The proposed normal pool elevation of the wet basin is 739.15 (which is still above the normal elevation of Blacklick Creek). As seen on the attached cut-fill plan (taken from sheet 6/25 of CC-19526), the

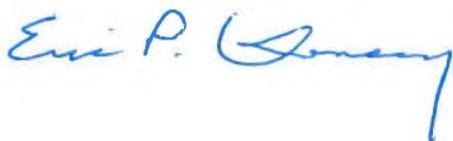
volume of fill placed below elevation 746.3 (the worst-case scenario base flood elevation) is 32,425 C.Y. The compensatory cut provided is 32,944 C.Y. (which does not include any volume in the proposed wet basin below the proposed spillway elevation 741.0).

- The proposed wet basin has enough capacity for water quantity and quality measures for the proposed Lakeside Village development. In fact, the 100-year storm release rates are substantially below the allowable release rates.
 - As currently designed, there is a 25-year critical storm, which must be released at a rate equal to or less than the 1-year pre-development flow rate.
 - Allowable release rate (1-year pre-development storm) is 4.85 cfs
 - 25-year post development release rate is 4.55 cfs
 - The 100-year post-development storm must be released at a rate equal to or less than the 10-year pre-development flow rate.
 - Allowable release rate (10-year pre-development storm) is 22.37 cfs.
 - 100-year post-development release rate is 7.57 cfs.
- The increased developable area will provide for a more enjoyable living experience. The increased area provides more room for a recreational path, green space, and access to the proposed wet basin.
- The development's 17.18-acre (0.0268 sq. mile) tributary area is miniscule compared to Blacklick Creek's 57.7 sq. mile tributary area. In addition, the development's approximate 1,000-foot (0.189 mile) Tc flow path is significantly less than Blacklick Creek's 28.4 mile Tc flow path (see StreamStats report on following pages). Given the disparity in tributary area size and time of concentrations to peak, it highly unlikely that both tributary areas will achieve peak flows at the same time.

Should you have any questions about the information presented, or if you need additional information, please do not hesitate to contact me.

Respectfully Submitted,

IBI Group



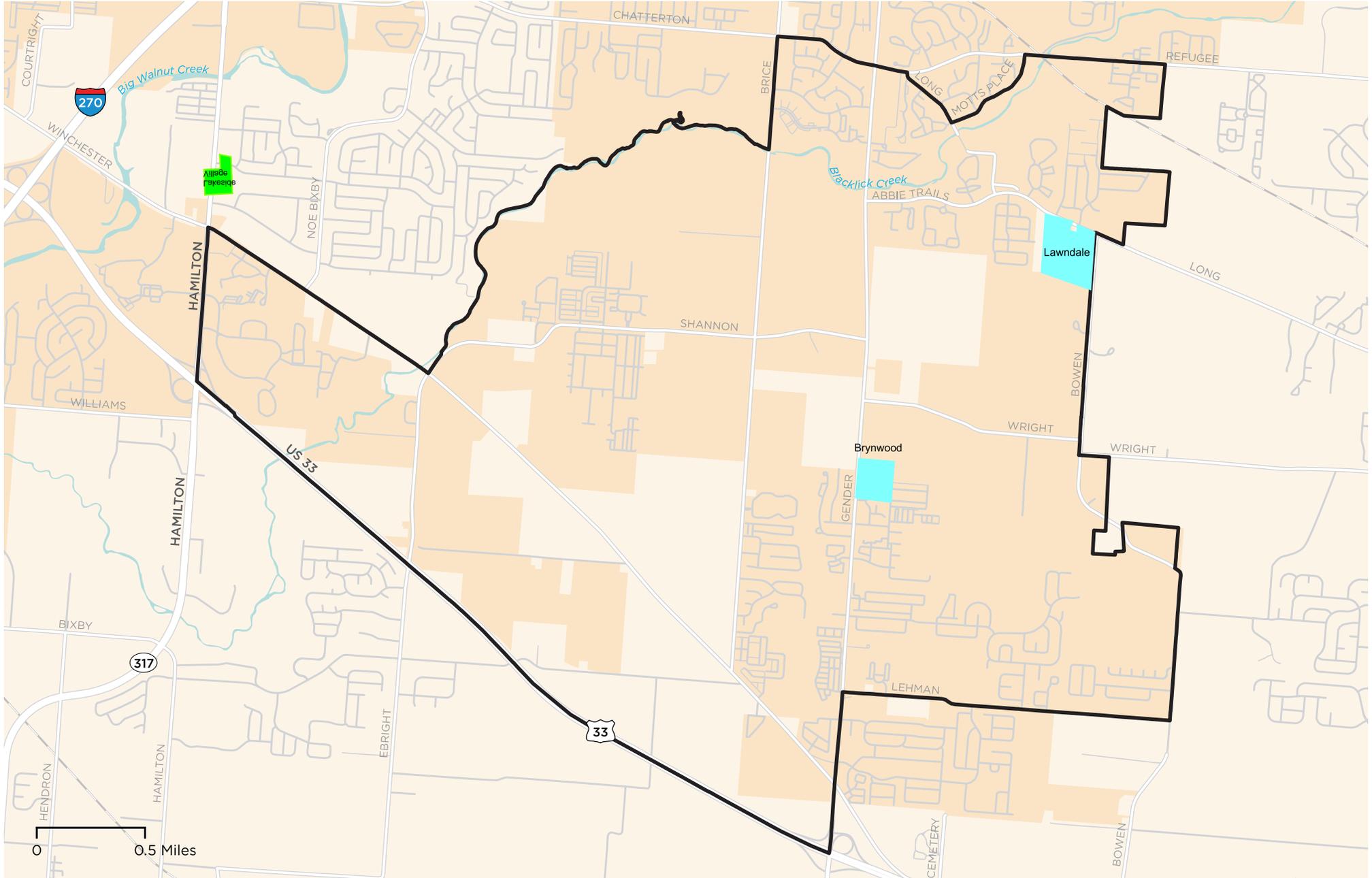
Eric P. Chenevey, P.E.

Project Manager

Email: eric.chenevey@ibigroup.com

Phone: (614) 818-4900, x2041

Cc: File



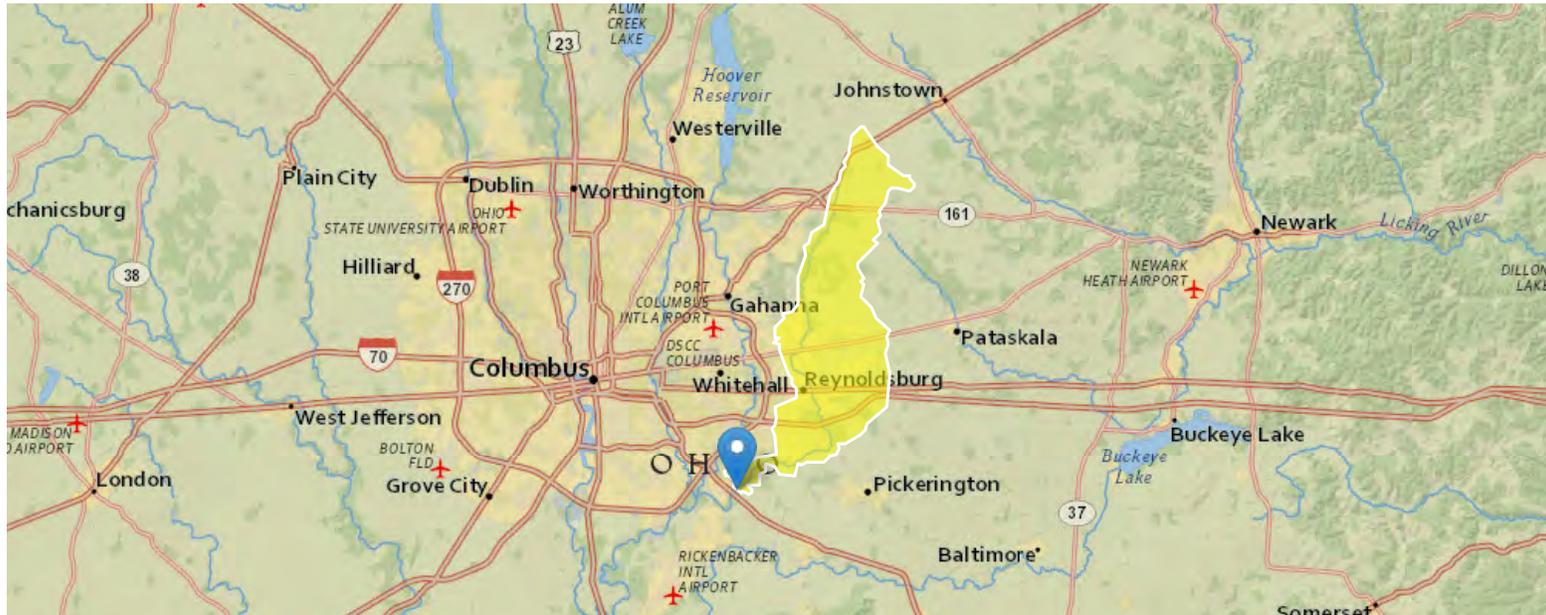
StreamStats Report

Region ID: OH

Workspace ID: OH20220126115415280000

Clicked Point (Latitude, Longitude): 39.88682, -82.87065

Time: 2022-01-26 06:54:36 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	57.7	square miles
LFPLENGTH	Length of longest flow path	28.4	miles
OHREGC	Ohio Region C Indicator	0	dimensionless
OHREGA	Ohio Region A Indicator	1	dimensionless
CSL1085LFP	Change in elevation divided by length between points 10 and 85 percent of distance along the longest flow path to the basin divide, LFP from 2D grid	16	feet per mi
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	1.25	percent
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	347667.6	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4429169.2	meters
FOREST	Percentage of area covered by forest	24	percent
LAT_CENT	Latitude of Basin Centroid	39.999	decimal degrees
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	50.3	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	16.6	percent
LONG_CENT	Longitude Basin Centroid	-82.7845	decimal degrees
PRECIP	Mean Annual Precipitation	37.4	inches
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.56	dimensionless

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	57.7	square miles	0.04	5989
OHREGC	Ohio Region C Indicator 1 if in C else 0	0	dimensionless	0	1
OHREGA	Ohio Region A Indicator 1 if in A else 0	1	dimensionless	0	1
CSL1085LFP	Stream Slope 10 and 85 Longest Flow Path	16	feet per mi	1.53	516
LC92STOR	Percent Storage from NLCD1992	1.25	percent	0	25.35

Peak-Flow Statistics Flow Report [Peak Flow Full Model Reg A SIR2019 5018]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	ASEp
50-percent AEP flood	2090	ft ³ /s	1110	3940	40.1
20-percent AEP flood	3330	ft ³ /s	1850	6010	37.2
10-percent AEP flood	4280	ft ³ /s	2360	7770	37.6
4-percent AEP flood	5600	ft ³ /s	3070	10200	38.1
2-percent AEP flood	6660	ft ³ /s	3610	12300	37.8
1-percent AEP flood	7780	ft ³ /s	4170	14500	39.6
0.2-percent AEP flood	10600	ft ³ /s	5640	19900	40.3

Peak-Flow Statistics Citations

Koltun, G.F., 2019, Flood-frequency estimates for Ohio streamgages based on data through water year 2015 and techniques for estimating flood-frequency characteristics of rural, unregulated Ohio streams: U.S. Geological Survey Scientific Investigations Report 2019–5018, 25 p. (<https://dx.doi.org/10.3133/sir20195018>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.6.2

StreamStats Services Version: 1.2.22

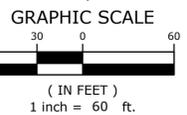
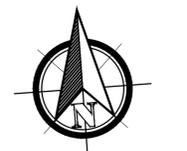
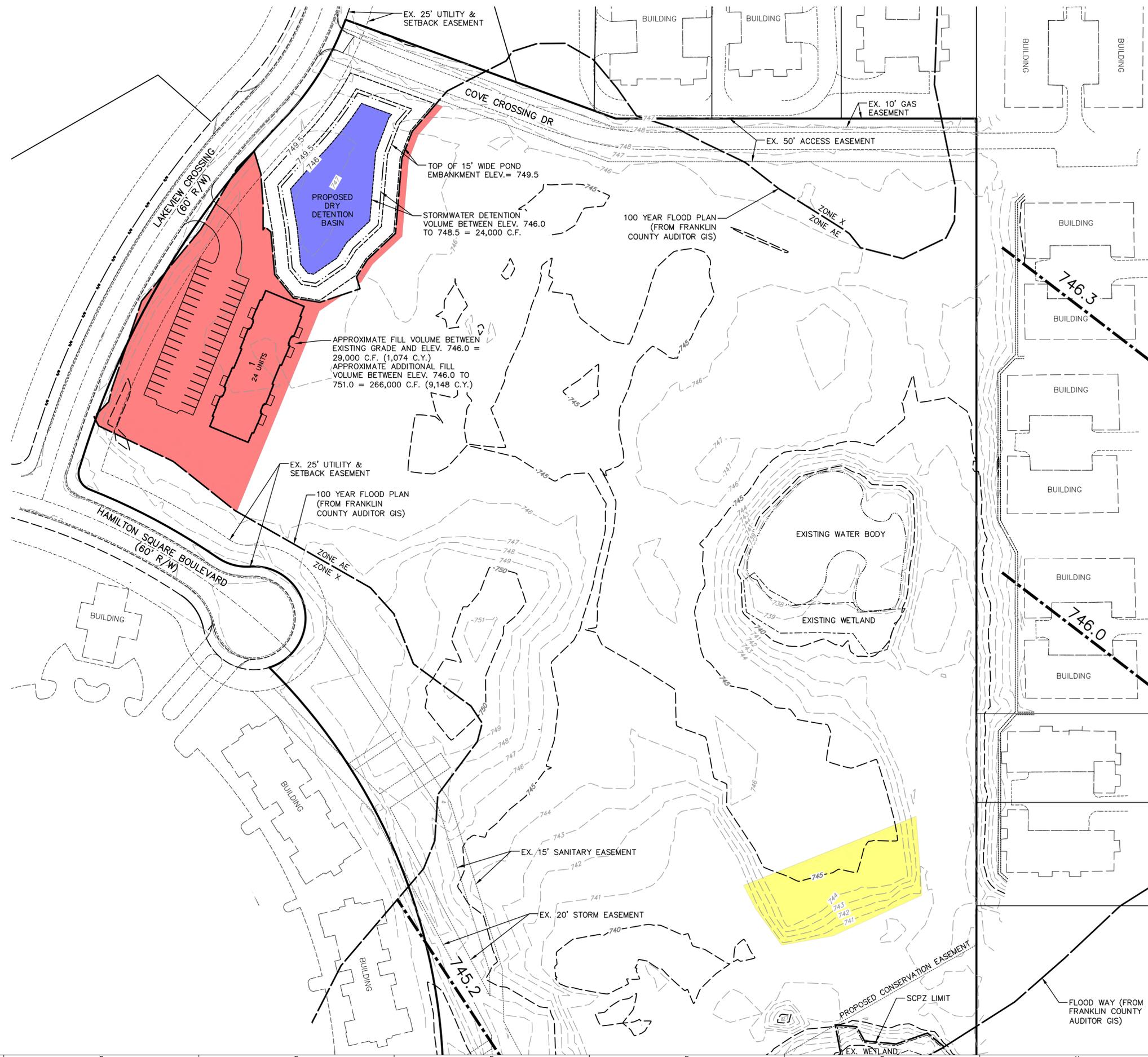
NSS Services Version: 2.1.2

LEGEND

- AREA LOCATED ABOVE BASE FLOOD ELEVATION AND USED FOR BMP MEASURES.
- AREA LOCATED BELOW BASE FLOOD ELEVATION AND TO BE FILLED. THE EXISTING ELEVATIONS IN THIS AREA ARE BETWEEN 745.2 TO 746.0. THE APPROXIMATE AMOUNT OF FILL NEEDED TO FILL WITHIN THESE PARAMETERS IS 29,000 C.F. (1,074 C.Y.)
- AREA LOCATED BELOW BASE FLOOD ELEVATION AND TO PROVIDE COMPENSATORY CUT. THE EXISTING ELEVATIONS IN THIS AREA ARE BETWEEN 741.0 TO 745.2. THE APPROXIMATE AMOUNT OF FILL NEEDED TO FILL WITHIN THESE PARAMETERS IS 35,000 C.F. (1,296 C.Y.)
- BASE FLOOD ELEVATION FROM FEMA FLOOD INSURANCE STUDY

NOTES

1. THE LIMITING FACTORS IN DEVELOPING THE SITE ARE:
 - PROVIDING A BMP LOCATION OUTSIDE THE 100-YEAR FLOOD PLAIN
 - PROVIDING BMP STORAGE VOLUME ABOVE THE BASE FLOOD ELEVATION
 - FILLING THE AREA (SHADED IN RED) TO AN ELEVATION THAT PROVIDES ADEQUATE ABILITY TO CONSTRUCT A STORM SEWER SYSTEM CAPABLE OF OUTFALLING INTO THE BMP
2. COMPENSATORY CUT TO COUNTER FILLING WITHIN THE 100-YEAR FLOOD PLAIN (THE AREA SHADED IN RED) IS TO BE PROVIDED IN ON-SITE AREA (THE AREA SHADED IN YELLOW)
3. AREA SHADED IN RED NEEDS RAISED TO AN AVERAGE ELEVATION OF 751.00. THE AMOUNT OF FILL REQUIRED BETWEEN ELEVATION 746.00 TO 751.00 IS APPROXIMATELY 266,000 C.F. (9,148 C.Y.). THE FILL WILL BE OBTAINED FROM THE ON-SITE FLOOD PLAIN AREA.



IBI GROUP
 8101 North High Street
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 Columbus OH 43235
 tel 614 818 4900
 fax 614 818 4901
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 ibigroup.com

REVISION:

SUBMISSION:

- PRELIMINARY ENGINEERING SET
- AGENCY REVIEW SET
- CONSTRUCTION DOCUMENT SET
- AS-BUILT DOCUMENT SET

STAMP:

COLUMBUS, OHIO
LAKESIDE VILLAGE
 LAKEVIEW CROSSING

DESIGN	DRAFT	CHECK
EPC	LMS	EPC

IBI NO.: 136243

DATE: JUNE 3, 2022

SCALE:

SHEET TITLE:

**TYPE II VARIANCE REQUEST
 "NO IMPACT"
 EXHIBIT**

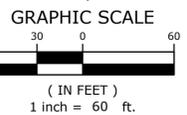
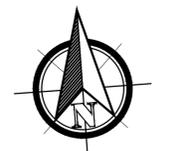
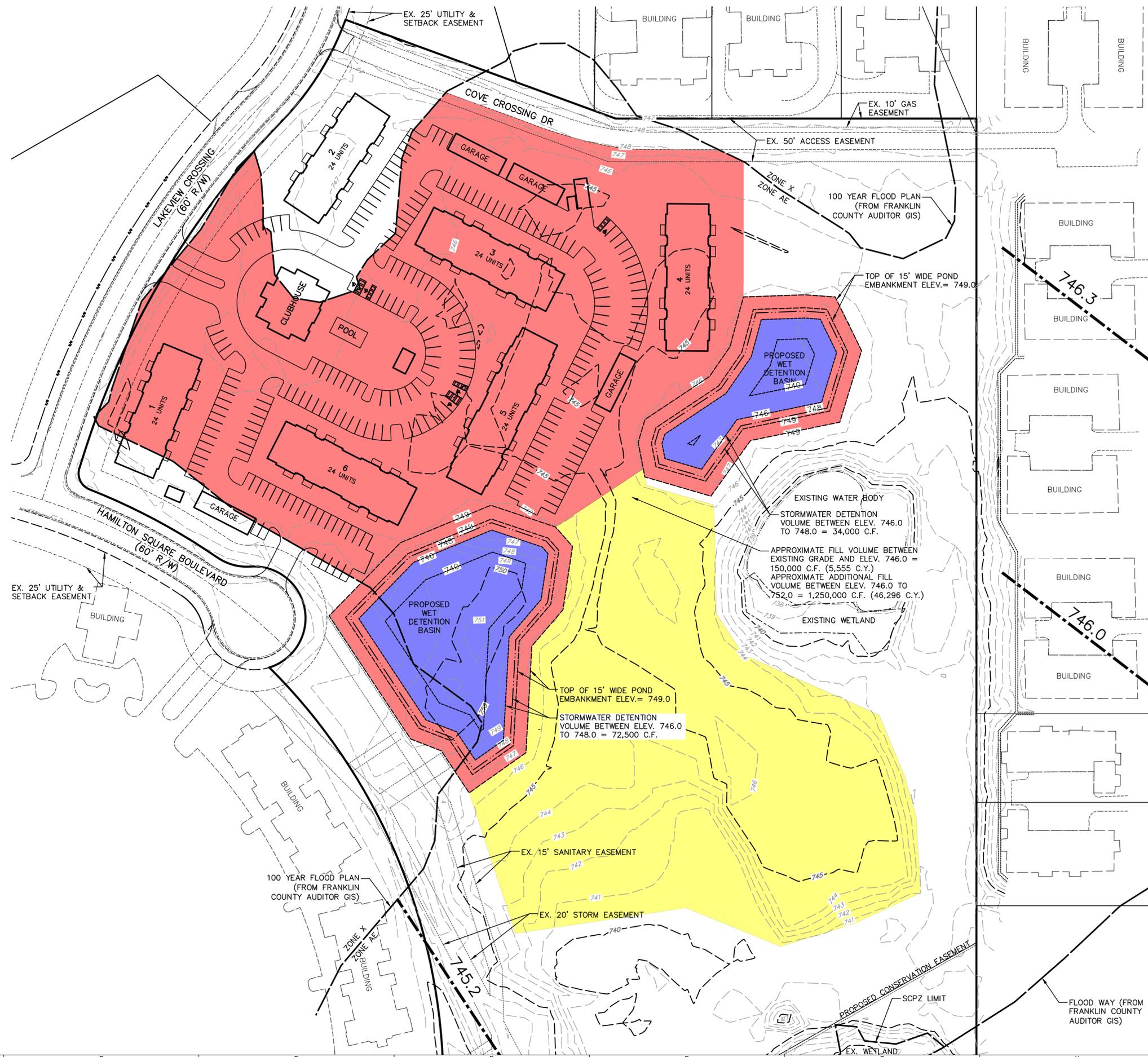
SHEET NO.: **1/1**

LEGEND

- AREA TO BE FILLED TO BE ABOVE BASE FLOOD ELEVATION AND USED FOR BMP MEASURES. NORMAL POOL ELEVATION OF WET BASIN TO BE AT OR ABOVE BASE FLOOD ELEVATION.
- AREA LOCATED BELOW BASE FLOOD ELEVATION AND TO BE FILLED. THE EXISTING ELEVATIONS IN THIS AREA ARE BETWEEN 745.2 TO 746.0. THE APPROXIMATE AMOUNT OF FILL NEEDED TO FILL WITHIN THESE PARAMETERS IS 150,000 C.F. (5,555 C.Y.)
- AREA LOCATED BELOW BASE FLOOD ELEVATION AND TO PROVIDE COMPENSATORY CUT OF APPROXIMATELY 400,000 C.F. (14,845 C.Y.). THE CUT FROM THIS AREA IS TO PROVIDE FILL FOR AREA SHADED IN RED.
- BASE FLOOD ELEVATION FROM FEMA FLOOD INSURANCE STUDY

NOTES

1. THE LIMITING FACTORS IN DEVELOPING THE SITE ARE:
 - PROVIDING BMP STORAGE VOLUME AT OR ABOVE THE BASE FLOOD ELEVATION
 - FILLING THE AREA (SHADED IN RED) TO AN ELEVATION THAT PROVIDES ADEQUATE ABILITY TO CONSTRUCT A STORM SEWER SYSTEM CAPABLE OF OUTFALLING INTO THE BMP
2. COMPENSATORY CUT TO COUNTER FILLING WITHIN THE 100-YEAR FLOOD PLAIN (THE AREA SHADED IN RED) IS TO BE PROVIDED IN THE YELLOW SHADED AREAS
3. AREA SHADED IN RED NEEDS RAISED TO AN AVERAGE ELEVATION OF 752.00. APPROXIMATELY 1,000,000 C.F. (51,851 C.Y.) OF FILL NEEDS IMPORTED TO BALANCE SITE.



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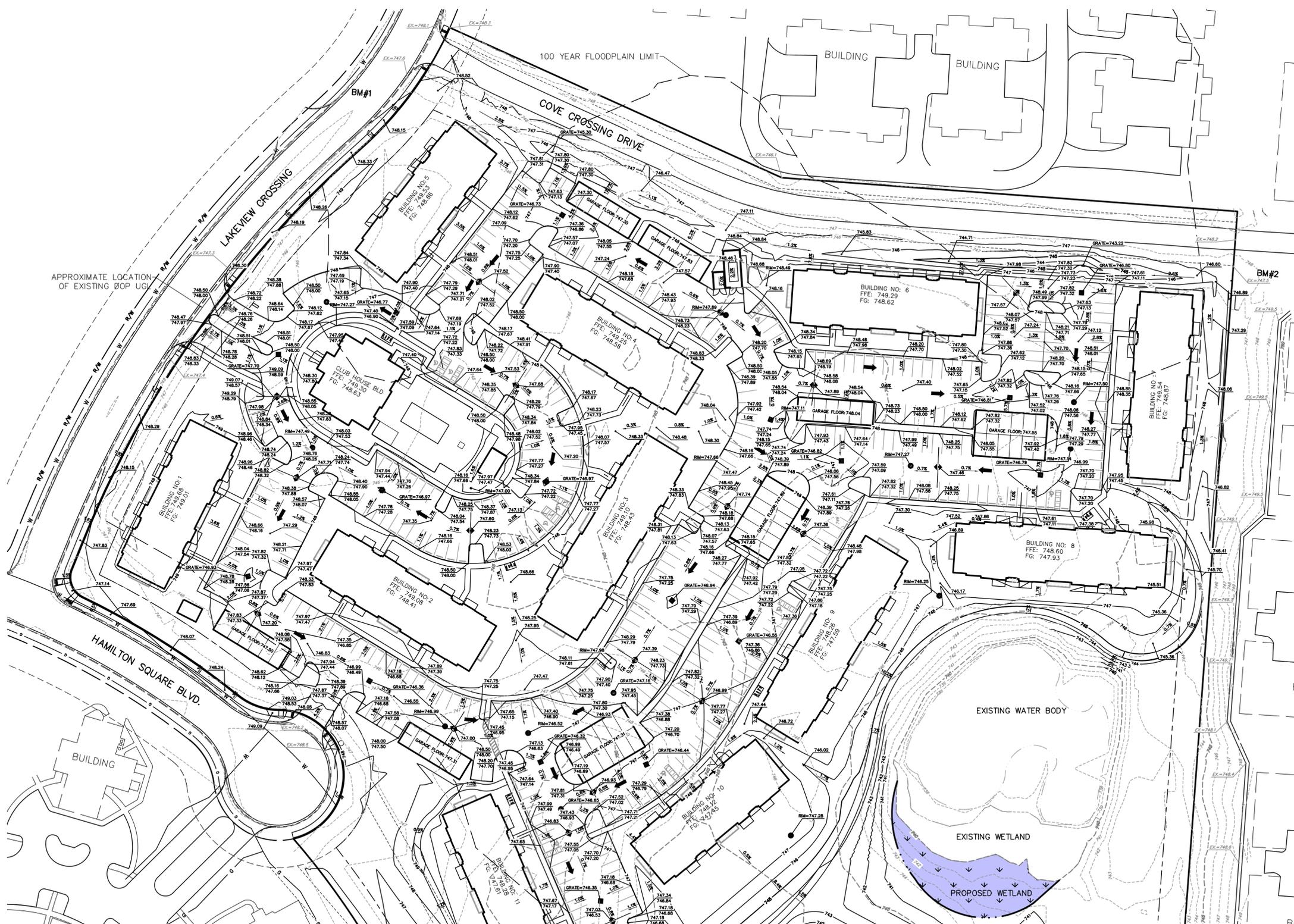
SCALE:

SHEET TITLE:
TYPE II VARIANCE REQUEST
"MINIMAL IMPACT"
EXHIBIT

SHEET NO.: **1/1**

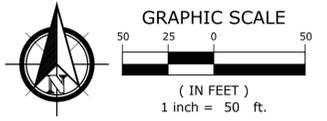
GENERAL GRADING NOTES

1. ALL SPOTS ARE PAVEMENT ELEVATION, UNLESS OTHERWISE NOTED.
2. ADD 0.5' TO PAVEMENT SPOT TO DETERMINE TOP OF CURB ELEVATION.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN ESTABLISHING ALL GRADES AND SLOPES IN PAVEMENT AREAS, RAMPS AND SIDEWALKS IN THE VICINITY OF HANDICAP PARKING. ACCESS AREAS SHALL COMPLY WITH FEDERAL, STATE AND LOCAL CODES. SLOPES NOT TO EXCEED 2% IN ANY DIRECTION.
4. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL AREAS. PAVEMENT SHALL BE TESTED FOR ANY PONDING CONDITIONS FOLLOWING CONSTRUCTION.
5. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING AROUND EXISTING UTILITIES. COORDINATE A RELOCATION WITH RESPECTIVE UTILITY OWNER.
6. PROVIDE JOINT SPACING ON SIDEWALKS PER ITEM 608.
7. SEED AND MULCH NON-PAVEMENT AREAS PER ITEM 659.
8. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
9. ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.
10. UPON COMPLETION OF THE FILL IN CONJUNCTION WITH THIS MASS GRADING PLAN, AN APPLICATION FOR A LETTER OF MAP REVISION (LOMR) WILL BE SUBMITTED TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). PRIOR TO THE EFFECTIVE DATE OF THE LOMR, A BUILDING CONSTRUCTED WITHIN THE DESIGNATED FILL AREA WILL BE ELEVATED AND/OR DRY FLOOD PROOFED IN ACCORDANCE WITH THE REQUIREMENTS OF C.C. CHAPTER 1150, FLOODPLAIN MANAGEMENT, OF THE COLUMBUS WATER, SEWER, AND ELECTRICITY CODE.
11. FILLING MAY BE ALLOWED IN THE FLOODWAY FRINGE ONLY IF ASSOCIATED WITH A GRADE AND FILL PLAN. THE GRADE AND FILL PLAN SHALL BE FULLY DETAILED AND SUBMITTED AS PART OF AN APPLICATION FOR A CERTIFICATE OF ZONING CLEARANCE. FILL SHALL NOT BE PLACED UNTIL AFTER THE CERTIFICATE OF ZONING CLEARANCE HAS BEEN ISSUED FOR GRADING AND FILLING.
12. REGARDLESS OF ANY DETERMINATION ISSUED BY FEMA TO REMOVE AND AREA FILLED AS PERMITTED AND APPROVED FROM THE DESIGNATED SFHA, DEVELOPMENT WITHIN THAT AREA OF FILL SHALL BE CONSTRUCTED WITH THE LOWEST FLOOR LEVEL, EXCLUDING A BASEMENT OR CRAWL SPACE, AT OR ABOVE THE FLOOD PROTECTION ELEVATION.
13. THE LOWEST GRADE ADJACENT TO BUILDING OR STRUCTURE TO BE CONSTRUCTED WITHIN THE DESIGNATED FILL AREA SHALL BE AT OR ABOVE THE FLOOD PROTECTION ELEVATION, WITH THAT GRADE ELEVATION TO EXTEND AT LEAST TWENTY (20) FEET FROM THE PROPOSED BUILDING TOWARDS THE FLOODWAY OR FLOODING SOURCE.
14. IN ADDITION, A RESIDENTIAL DWELLING WITHIN THE DESIGNATED FILL AREA MUST AVE A MEANS OF INGRESS AND EGRESS AT OR ABOVE THE BASE FLOOR ELEVATION THAT EXTENDS CONTINUOUSLY FROM THE DWELLING TO A LOCATION OUTSIDE THE SPECIAL FLOOD HAZARD AREA WITHIN THE SUBJECT SITE.
15. ALL STRUCTURES ASSOCIATED WITH FUTURE DEVELOPMENT WITHIN THE AREA OF THE FLOODPLAIN FILL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD OF BEING "REASONABLY SAFE FROM FLOODING", AS OUTLINED IN TECHNICAL BULLETIN 10-01, DATED MAY 2001, PUBLISHED BY FEMA OR SUCCESSOR DOCUMENTS.
16. COMPLIANCE WITH THE FLOODPLAIN CODE 1150.29 (A) AND (B) IS REQUIRED FOR ANY GRADING ACTIVITIES WITHIN THE FLOODPLAIN.



LEGEND

- | | | | |
|---------------|----------------------------|--------|---------------------------|
| — C — | CENTERLINE | — EX — | EX. SIGN |
| — R/W — | RIGHT OF WAY LINE | — EX — | EX. LIGHT POLE |
| — P — | PROPERTY LINES | — EX — | EX. GAS VALVE |
| — STM — | STORM SEWER | — EX — | EX. TELE. BOX |
| — S — | SANITARY SEWER | — EX — | EX. WATER VALVE |
| — W — | WATER LINE | — EX — | EX. FIRE HYDRANT |
| — T — | TELEPHONE LINE | — EX — | EX. STORM CATCH BASIN |
| — E — | ELECTRIC LINE | — EX — | EX. SANITARY MANHOLE |
| — G — | GAS LINE | — EX — | EX. UTILITY POLE |
| — CTV — | EXISTING CABLE T.V. | — EX — | EX. FLAG POLE |
| — 903 — | EXISTING CONTOUR | — EX — | EX. GROUND MOUNTED LIGHT |
| × 27.18 | PROPOSED SPOT ELEVATION | R.D. | ROOF DRAIN PIPE |
| × 27.18 | EXISTING SPOT ELEVATION | D.S. | DOWN SPOUT |
| — 903 — | PROPOSED CONTOUR | ⊙ | IRON PIN FOUND (AS NOTED) |
| — [] — | PROPOSED CONCRETE | | |
| — [] — | DIRECTION OF SURFACE FLOW | | |
| — [] — | MAJOR STORM RUNOFF PATH | | |
| — X — X — X — | EXISTING FENCE LINE | | |
| — [] — | MAJOR DRAINAGE ARROWS | | |
| × 27.18 | TOP OF CURB SPOT ELEVATION | | |
| 27.18 | PAVEMENT SPOT ELEVATION | | |



MATCH LINE - SEE SHEET 5

"PREFERRED ALTERNATIVE" EXHIBIT

EASEMENT REFERENCE			REVISIONS		
CITY NO.	COUNTY RECORDER	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE
	VOL.	PAGE			



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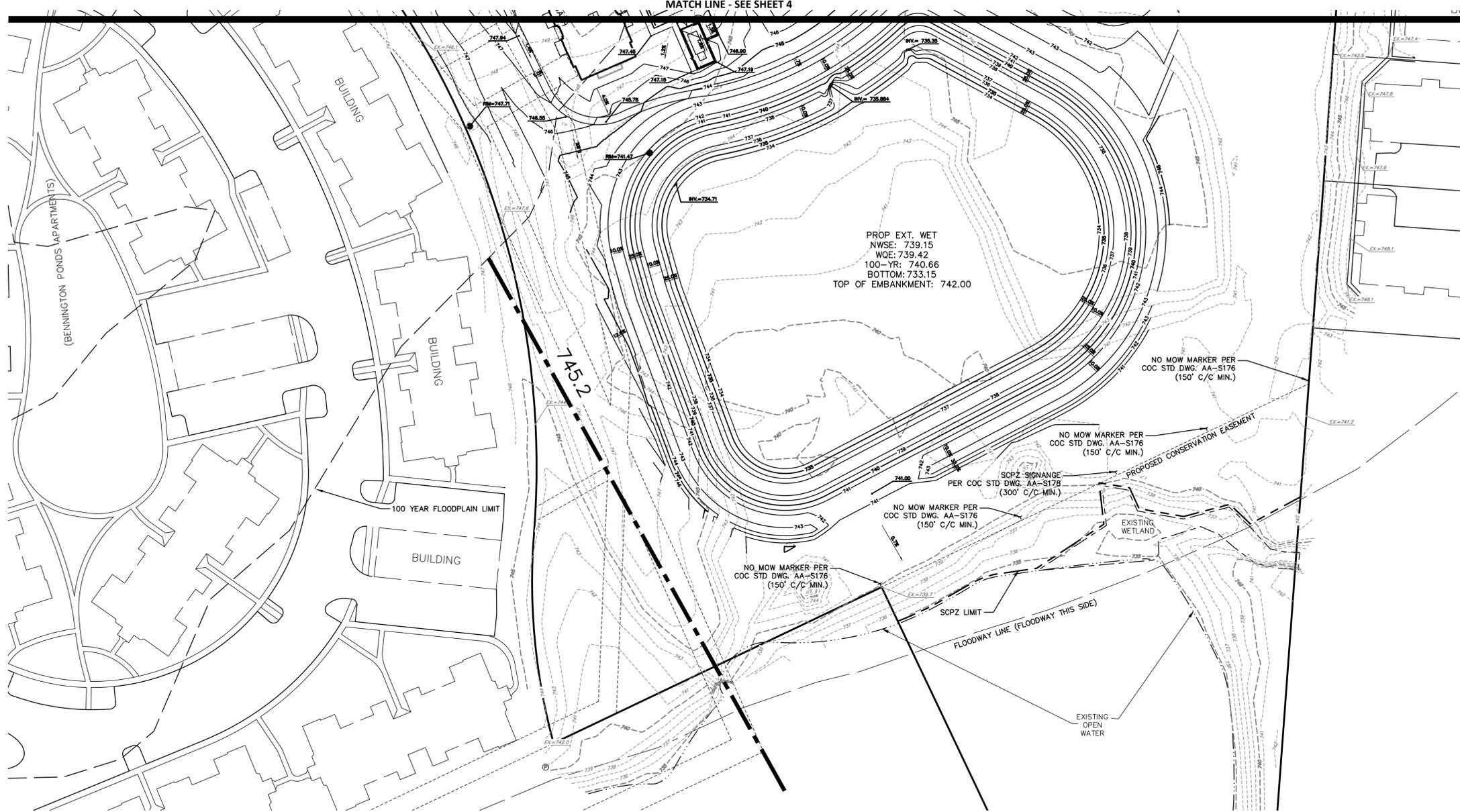
PROJECT TITLE: PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR LAKESIDE VILLAGE 4100 LAKEVIEW CROSSING COLUMBUS, OH 43125 SITE GRADING PLAN			
DIVISION USE ONLY		OWNER	
		CONTRACTOR	
		INSPECTOR	
		AGREMENT	COMPLETED
		INDEX DETAIL	RECORD FILE

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
SCALE: HORIZ: VERT:	SHEET: 4/25
CONTRACT DRAWING NO. CC-19526	RECORD PLAN NO.

MATCH LINE - SEE SHEET 4

GENERAL GRADING NOTES

- ALL SPOTS ARE PAVEMENT ELEVATION, UNLESS OTHERWISE NOTED.
- ADD 0.5' TO PAVEMENT SPOT TO DETERMINE TOP OF CURB ELEVATION.
- THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN ESTABLISHING ALL GRADES AND SLOPES IN PAVEMENT AREAS, RAMPS AND SIDEWALKS IN THE VICINITY OF HANDICAP PARKING. ACCESS AREAS SHALL COMPLY WITH FEDERAL, STATE AND LOCAL CODES. SLOPES NOT TO EXCEED 2% IN ANY DIRECTION.
- THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL AREAS. PAVEMENT SHALL BE TESTED FOR ANY PONDING CONDITIONS FOLLOWING CONSTRUCTION.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING AROUND EXISTING UTILITIES. COORDINATE AN RELOCATION WITH RESPECTIVE UTILITY OWNER.
- PROVIDE JOINT SPACING ON SIDEWALKS PER ITEM 608.
- SEED AND MULCH NON-PAVEMENT AREAS PER ITEM 659.
- REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
- ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.
- UPON COMPLETION OF THE FILL IN CONJUNCTION WITH THIS MASS GRADING PLAN, AN APPLICATION FOR A LETTER OF MAP REVISION (LOMR) WILL BE SUBMITTED TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). PRIOR TO THE EFFECTIVE DATE OF THE LOMR, A BUILDING CONSTRUCTED WITHIN THE DESIGNATED FILL AREA WILL BE ELEVATED AND/OR DRY FLOOD PROOFED IN ACCORDANCE WITH THE REQUIREMENTS OF C.C. CHAPTER 1150, FLOODPLAIN MANAGEMENT, OF THE COLUMBUS WATER, SEWER, AND ELECTRICITY CODE.
- FILLING MAY BE ALLOWED IN THE FLOODWAY FRINGE ONLY IF ASSOCIATED WITH A GRADE AND FILL PLAN. THE GRADE AND FILL PLAN SHALL BE FULLY DETAILED AND SUBMITTED AS PART OF AN APPLICATION FOR A CERTIFICATE OF ZONING CLEARANCE. FILL SHALL NOT BE PLACED UNTIL AFTER THE CERTIFICATE OF ZONING CLEARANCE HAS BEEN ISSUED FOR GRADING AND FILLING.
- REGARDLESS OF ANY DETERMINATION ISSUED BY FEMA TO REMOVE AND AREA FILLED AS PERMITTED AND APPROVED FROM THE DESIGNATED SFHA, DEVELOPMENT WITHIN THAT AREA OF FILL SHALL BE CONSTRUCTED WITH THE LOWEST FLOOR LEVEL, EXCLUDING A BASEMENT OR CRAWL SPACE, AT OR ABOVE THE FLOOD PROTECTION ELEVATION.
- THE LOWEST GRADE ADJACENT TO A BUILDING OR STRUCTURE TO BE CONSTRUCTED WITHIN THE DESIGNATED FILL AREA SHALL BE AT OR ABOVE THE FLOOD PROTECTION ELEVATION, WITH THAT GRADE ELEVATION TO EXTEND AT LEAST TWENTY (20) FEET FROM THE PROPOSED BUILDING TOWARDS THE FLOODWAY OR FLOODING SOURCE.
- IN ADDITION, A RESIDENTIAL DWELLING WITHIN THE DESIGNATED FILL AREA MUST AVE A MEANS OF INGRESS AND EGRESS AT OR ABOVE THE BASE FLOOD ELEVATION THAT EXTENDS CONTINUOUSLY FROM THE DWELLING TO A LOCATION OUTSIDE THE SPECIAL FLOOD HAZARD AREA WITHIN THE SUBJECT SITE.
- ALL STRUCTURES ASSOCIATED WITH FUTURE DEVELOPMENT WITHIN THE AREA OF THE FLOODPLAIN FILL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD OF BEING "REASONABLY SAFE FROM FLOODING", AS OUTLINED IN TECHNICAL BULLETIN 10-01, DATED MAY 2001, PUBLISHED BY FEMA OR SUCCESSOR DOCUMENTS.
- COMPLIANCE WITH THE FLOODPLAIN CODE 1150.29 (A) AND (B) IS REQUIRED FOR ANY GRADING ACTIVITIES WITHIN THE FLOODPLAIN.



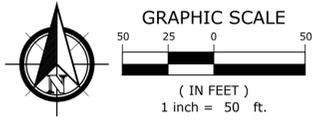
LEGEND

- | | | | |
|---------------|----------------------------|--------|---------------------------|
| — C — | CENTERLINE | — EX — | EX. SIGN |
| — R/W — | RIGHT OF WAY LINE | — EX — | EX. LIGHT POLE |
| — P — | PROPERTY LINES | — EX — | EX. GAS VALVE |
| — STM — | STORM SEWER | — EX — | EX. TELE. BOX |
| — S — | SANITARY SEWER | — EX — | EX. WATER VALVE |
| — W — | WATER LINE | — EX — | EX. FIRE HYDRANT |
| — T — | TELEPHONE LINE | — EX — | EX. STORM CATCH BASIN |
| — E — | ELECTRIC LINE | — EX — | EX. SANITARY MANHOLE |
| — G — | GAS LINE | — EX — | EX. UTILITY POLE |
| — CTV — | EXISTING CABLE T.V. | — EX — | EX. FLAG POLE |
| — 903 — | EXISTING CONTOUR | — EX — | EX. GROUND MOUNTED LIGHT |
| × 27.18 | PROPOSED SPOT ELEVATION | R.D. | ROOF DRAIN PIPE |
| × 27.18 | EXISTING SPOT ELEVATION | D.S. | DOWN SPOUT |
| — 903 — | PROPOSED CONTOUR | ⊙ | IRON PIN FOUND (AS NOTED) |
| — [] — | PROPOSED CONCRETE | | |
| — [] — | DIRECTION OF SURFACE FLOW | | |
| — [] — | MAJOR STORM RUNOFF PATH | | |
| — X — X — X — | EXISTING FENCE LINE | | |
| — [] — | MAJOR DRAINAGE ARROWS | | |
| × 27.18 | TOP OF CURB SPOT ELEVATION | | |
| 27.18 | PAVEMENT SPOT ELEVATION | | |

SUMMARY OF EARTHWORK WITHIN 100-YEAR FLOODPLAIN

THE BASE FLOOD ELEVATION (BFE) VARIES FROM 745.5 TO 746.3 ACROSS THE SITE (IN AN WEST-EAST DIRECTION). FOR PURPOSES OF THIS ANALYSIS, A BFE = 746.3 IS USED. SEE FIRM MAP #39049C0363K REVISED JUNE 17, 2008, WITH FEMA FLOOD INSURANCE STUDY #39049C0001D REVISED JUNE 2011. ELEVATIONS PER NAVD88 (NORTH AMERICAN VERTICAL DATUM 1988)

VOLUME OF CUT BELOW BFE 746.3	=	32,944 C.Y.
(EXCLUDES CUT BELOW 741 OVERFLOW)	-	32,425 C.Y. (VOLUME OF FILL BELOW BFE)
TOTAL		519 C.Y. EXCESS CUT PROVIDED FOR ADDITIONAL COMPENSATION



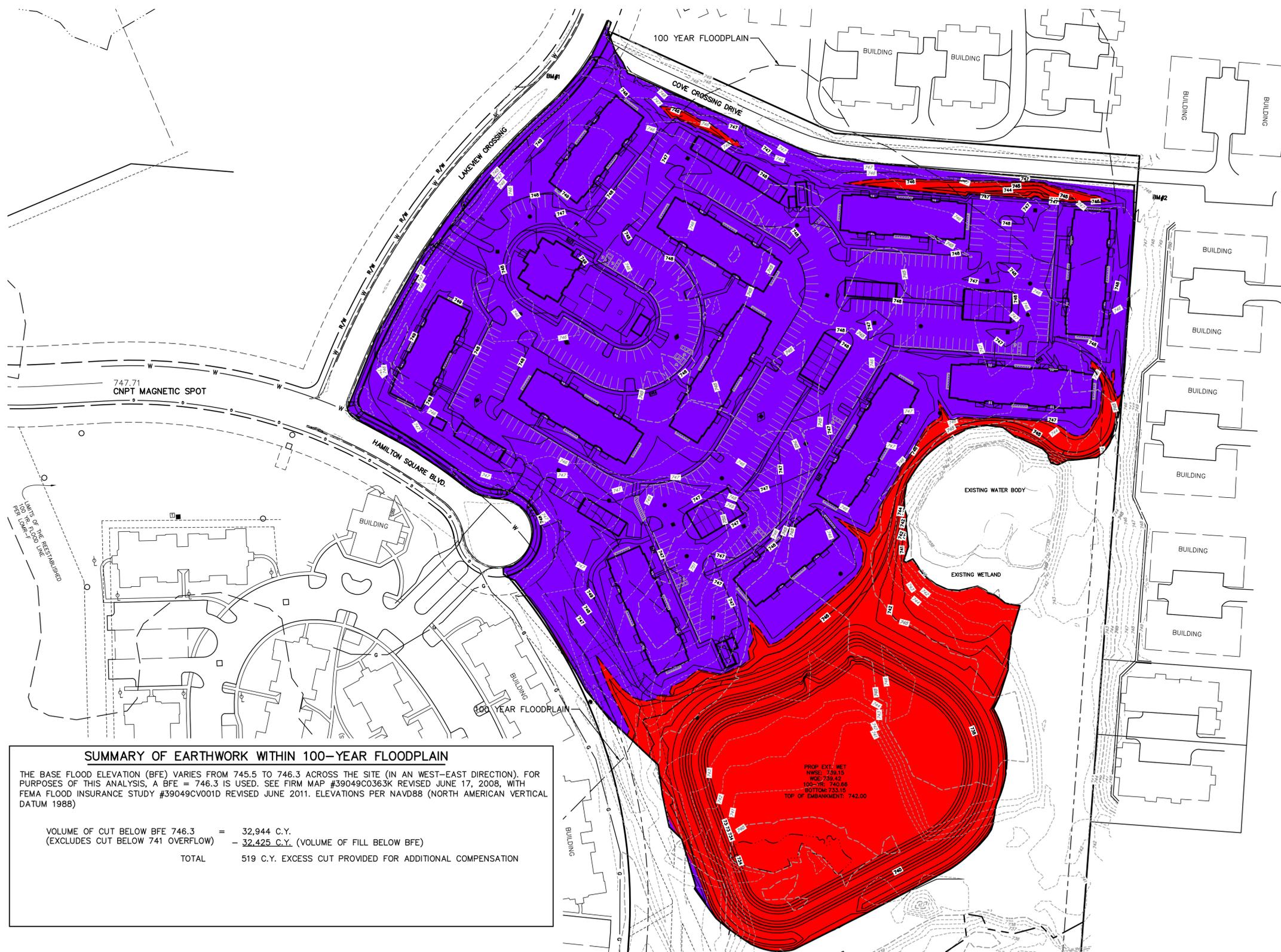
EASEMENT REFERENCE			REVISIONS		
CITY NO.	COUNTY RECORDER	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE
	VOL.	PAGE			



IBI GROUP
8101 N. HIGH ST.
COLUMBUS, OH 43235
Contact: Eric Chenevey
614-818-4900 ext. 2041
Fax: 614-818-4901
www.ibigroup.com

PROJECT TITLE: PRIVATE STORM SEWER AND STORMWATER FACILITIES FOR LAKESIDE VILLAGE 4100 LAKEVIEW CROSSING COLUMBUS, OH 43125 SITE GRADING PLAN			
DIVISION USE ONLY		OWNER	
		CONTRACTOR	
		INSPECTOR	
		AGREEMENT	COMPLETED
		INDEX DETAIL	RECORD FILE

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF SEWERAGE AND DRAINAGE DIVISION USE ONLY	
SCALE: HORIZ: VERT:	SHEET: 5/25
CONTRACT DRAWING NO. CC-19526	RECORD PLAN NO.



- LEGEND**
- C— CENTERLINE
 - R/W— RIGHT OF WAY LINE
 - P— PROPERTY LINES
 - STM--- STORM SEWER
 - S--- SANITARY SEWER
 - W--- WATER LINE
 - T--- TELEPHONE LINE
 - E--- ELECTRIC LINE
 - G--- GAS LINE
 - CTV--- EXISTING CABLE T.V.
 - 903--- EXISTING CONTOUR
 - × 27.18 PROPOSED SPOT ELEVATION
 - × 27.18 EXISTING SPOT ELEVATION
 - 903--- PROPOSED CONTOUR
 - ▭ PROPOSED CONCRETE
 - DIRECTION OF SURFACE FLOW
 - X—X—X— EXISTING FENCE LINE
 - × 27.18 / 27.18 TOP OF CURB SPOT ELEVATION
PAVEMENT SPOT ELEVATION
 - EX. SIGN
 - EX. LIGHT POLE
 - EX. GAS VALVE
 - EX. TELE. BOX
 - EX. WATER VALVE
 - EX. FIRE HYDRANT
 - EX. STORM CATCH BASIN
 - EX. SANITARY MANHOLE
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 - EX. FLAG POLE
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 - R.D. ROOF DRAIN PIPE
 - D.S. DOWN SPOUT
 - ⊙ IRON PIN FOUND (AS NOTED)

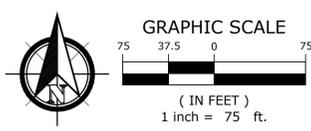
- APPROXIMATE LOCATION OF PROPOSED EXCAVATION BELOW BFE 746.3
- APPROXIMATE LOCATION OF PROPOSED FILL ABOVE BFE 746.3

SUMMARY OF EARTHWORK WITHIN 100-YEAR FLOODPLAIN

THE BASE FLOOD ELEVATION (BFE) VARIES FROM 745.5 TO 746.3 ACROSS THE SITE (IN AN WEST-EAST DIRECTION). FOR PURPOSES OF THIS ANALYSIS, A BFE = 746.3 IS USED. SEE FIRM MAP #39049C0363K REVISED JUNE 17, 2008, WITH FEMA FLOOD INSURANCE STUDY #39049C001D REVISED JUNE 2011. ELEVATIONS PER NAVD88 (NORTH AMERICAN VERTICAL DATUM 1988)

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TOTAL 519 C.Y. EXCESS CUT PROVIDED FOR ADDITIONAL COMPENSATION



PROP EXT. WET
 NWSE: 739.15
 WGE: 738.42
 100-YR: 740.68
 BOTTOM: 733.15
 TOP OF EMBANKMENT: 742.00

EASEMENT REFERENCE			REVISIONS		
CITY NO.	COUNTY RECORDER VOL. PAGE	GRANTOR	NO.	DESCRIPTION	APPROVAL/DATE

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IBI GROUP
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 614-818-4900 ext. 2041
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